

Lac

Statistics at a glance

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CONTENTS

Sl. No.	Particulars	Page No.
1.	Introduction	
2.	Survey Area	
3.	Lac Production in India	
4.	Lac Processing in India	
5.	Export of lac from India	
6.	Import of lac in India	
7.	Diversified uses of lac in India	
8.	Export and import of Natural Resins and Gums	
List of Tables		
1.	States and districts surveyed	
2.	Sample size during the survey	
3.	Lac production in India during 2009-10	
4.	Districts producing over 1,000 tons of lac during 2009-10	
5.	Lac processing centers in India during 2008-09	
6.	Amount of sticklac processed in India during 2008-09	
7.	Markets with annual arrival of more than 500 tons during 2009-10	
8.	Export of lac and its value added products from India during 2008-09	
9.	Top 15 importing countries of Indian lac during 2008-09	
10.	Export of lac during last five years	
11.	Import of lac during last five years	
12.	Diversified uses of lac in India	
13.	Export and import of Natural Resins and Gums during 2008-09	
14.	Lac production scenario in India during 2009-10	
15.	Lac producing areas in the country	
List of Figures		
1.	Share of different crops in lac production at national level	
2.	Lac production in India during last four years	
3.	Share of different states in lac processing at national level	
4.	Lac processing in India during last four years	
5.	Trend in export of lac from India during last five years	
6.	Share of different lac export items from India (in value)	
7.	Trend in import of lac in India during last five years	
8.	Trend in export of Natural Resins and Gums from India during last five years	
9.	Trend in import of Natural Resins and Gums in India during last five years	

Introduction

Lac is a natural resin secreted by an insect *Kerria lacca* (Kerr.), which thrives on the tender twigs of specific host trees viz., *palas* (*Butea monosperma*), *ber* (*Zizyphus mauritiana*), *kusum* (*Schleichera oleosa*), *Flemingia semialata*, *Ficus* spp. etc. The raw lac is the source of three valuable, natural and renewable products i.e. resin, dye and wax. *Rangeeni* and *Kusmi* are the two strains of lac insect which are classified based on preference of the insect for specific host plants. Lac cultivation is an important source of income for livelihood of the forest and sub-forest dwellers in different states. Besides, it has high potential for generating employment for both men and women in forest and sub-forest areas of Jharkhand, Chhattisgarh, Madhya Pradesh, West Bengal, Maharashtra, Orissa and parts of Uttar Pradesh, Andhra Pradesh, Gujarat and NEH region. It is a high remunerative crop, paying high economic returns to the farmers and also foreign exchange to the country through its export. Lac is mainly produced in India, Thailand, Indonesia, parts of China, Myanmar, Philippines, Vietnam, Cambodia etc. and India is the largest producer of lac in the world.

Estimation of lac production is required by the Government, lac-based industries, lac traders, production entrepreneurs and exporters. The cultivation of lac on a large number of hosts of different kinds, its collection by numerous small growers, the variations in the yield, depending on the type and size of the host, the cultivation practices and climatic conditions, pose serious difficulties in the estimation of production of this insect based crop. With timely and accurate estimation of lac production, the lac processors, lac traders, exporters, lac growers and policy makers can plan their operations in time. Accuracy in production estimate would be helpful in precision planning by all concerned. Besides knowing the present status, it would be helpful in regulating imports, planning for enhanced exports, reasonable prices and reliability in supply of lac based products.

Survey Area

Efforts have been made at national level for collection of lac related information and data. Survey was made in various lac growing areas of the country for collection of data throughout the year during 2009-10. The requisite data have been collected from the respondents at various lac markets and lac processing centers. For updating the information and data regular contacts were also made through phone calls with the respondents. Survey have been conducted in 27 lac growing districts of 8 states covering 37 lac traders, 31 lac manufacturers and 5 other key informants during 2009-10. Name of the states and districts in which survey were carried out have been presented in Table 1 and sample size surveyed during the year have been presented in Table 2.

Table 1. States and districts surveyed

State	Districts
Assam	Karbi-Anglong
Chhattisgarh	Bastar, Bilaspur, Dhamtari, Janjgir-Champa, Kanker, Korba, Mahasamund, Surguja, Raipur and Rajnandgaon
Gujarat	Vadodara
Jharkhand	Garhwa, Gumla, Latehar, Palamau, Ranchi, Simdega and West Singhbhum
Madhya Pradesh	Balaghat, Hosangabad, Mandla and Seoni
Maharashtra	Gondia
Orissa	Balasore
West Bengal	Bankura and Purulia

Table 2. Sample size during the survey

State	Number of Districts	Total number of respondents		
		Number of traders	Number of manufacturers	Govt. Officials/ NGOs/ Other key informants
Assam	1	2	-	1
Chhattisgarh	10	9	10	-
Gujarat	1	2	-	-
Jharkhand	7	12	9	1
Madhya Pradesh	4	6	2	1
Maharashtra	1	2	2	1
Orissa	1	2	-	1
West Bengal	2	2	8	1
Total	27	37	31	5

Export data of lac and its value added products were collected from Shellac and Forest Products Export Promotion Council, Kolkata while export and import data of natural resins, gums and gum-resins were collected from Directorate General of Commercial Intelligence and Statistics, Kolkata.

Lac production in India

On the basis of survey in the markets of different lac producing districts and states, the estimated national production of sticklac during 2009-10 was approximately 16,495 tons. Jharkhand state ranks 1st followed by Chhattisgarh, Madhya Pradesh, West Bengal and Maharashtra. These five states contributed around 95 per cent of the national lac production. Contribution of Jharkhand in national lac production was 41.98 per cent followed by Chhattisgarh (30.28 %), Madhya Pradesh (14.49 %), West Bengal (5.18 %) and Maharashtra (3.15 %). Regarding share of different crops, *jethwi* ranks 1st (42.55 %) followed by *baisakhi* (34.62 %), *aghani* (14.40 %) and *katki* (8.43 %) in national lac production. In the year 2009-10, the production of *baisakhi* and *jethwi* crop has increased by around 11 per cent and 133 per cent respectively while production of *katki* and *aghani* crop has decreased by 73 per cent and 39 per cent respectively in comparison to last year production. At national level the production of lac was around 4 per cent lesser than that of last year. Lac production scenario in India during 2009-10, districts producing over 1,000 tons of lac, share of different crops at national level and lac production in India during last four years are presented in Table 3 & 4 and Fig. 1 & 2 respectively.

Table 3. Lac production in India during 2009-10 (in tons)*

Name of State / Districts	Name of lac crop				Total Production
	Baisakhi	Jethwi	Katki	Aghani	
Andhra Pradesh	15	4	15	1	35
Assam	40	0	60	0	100
Chhattisgarh	2470	1550	340	635	4995
Gujarat	10	20	10	25	65
Jharkhand	385	5000	140	1400	6925
Madhya Pradesh	1910	130	205	145	2390
Maharashtra	355	0	165	0	520
Meghalaya	5	0	5	0	10
Orissa	70	115	90	125	400
Uttar Pradesh	175	0	25	0	200
West Bengal	275	200	335	45	855
TOTAL	5710	7019	1390	2376	16495

* See Table 12 for details.

Table 4. Districts producing over 1,000 tons of lac during 2009-10

District (States)	Production (tons)	Rank
Simdega (Jharkhand)	3145	1
Korba (Chhattisgarh)	2035	2
Seoni (Madhya Pradesh)	1375	3
Gumla (Jharkhand)	1435	4
West Singhbhum (Jharkhand)	1060	5

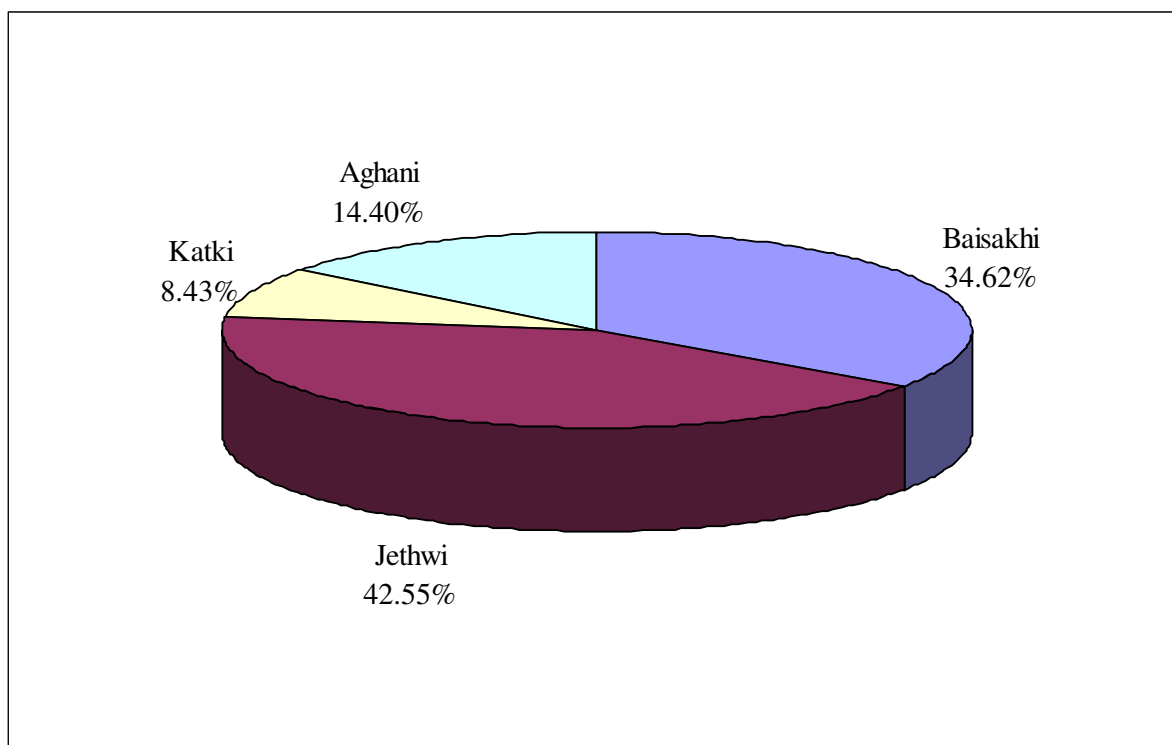


Fig 1. Share of different crops in lac production at national level

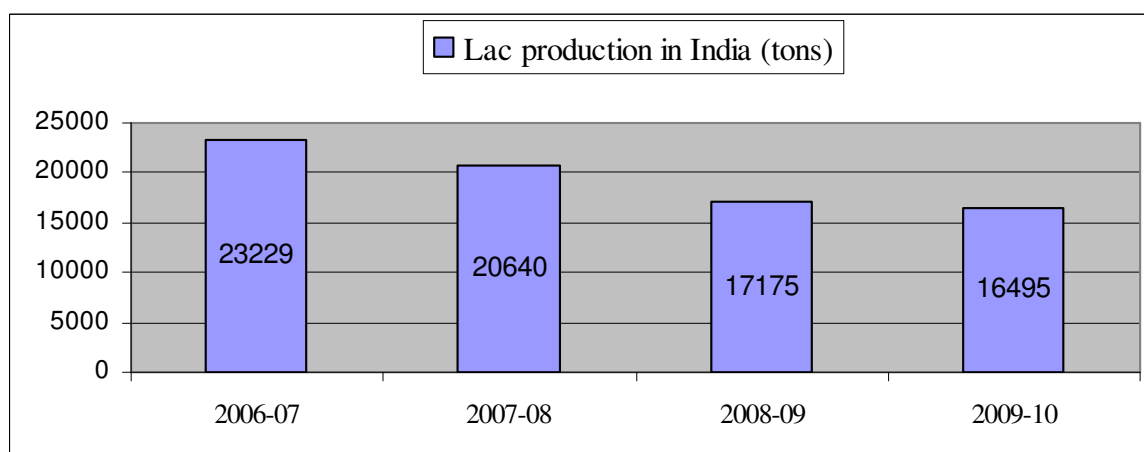


Fig 2. Lac production in India during last four years

Lac Processing in India

On the basis of survey conducted at different lac processing centers in the country, the total quantity of sticklac processed during 2008-09 was 19,700 tons which also included the imported lac in India. 29 Lac processing units in Chhattisgarh, 16 units in Jharkhand, 6 units in Maharashtra, 2 units in Madhya Pradesh and 138 units in West Bengal were in running condition during the year 2008-09. In processing of lac, West Bengal ranked 1st (39.35 %) followed by Chhattisgarh (33.83 %), Jharkhand (19.55 %), Maharashtra (6.02 %) and Madhya Pradesh (1.25 %). The information on lac processing centers in India, amount of sticklac processed at different lac processing centers in the country and share of different states in lac processing during 2008-09 has been presented in Table 5, 6 and Fig. 3 respectively. There were 10 primary and 7 secondary markets existing at national level in which annual arrival of sticklac was more than 500 tons. Name of the primary and secondary markets with annual arrival of over 500 tons have been presented in Table 7. Amount of lac processed in India during last four years has been presented in Fig. 4.

Table 5. Lac processing centers in India during 2008-09

State	District /Center	No. of processing units	Products made
Chhattisgarh	Bilaspur (Pendra)	2	Seedlac, Button lac
	Dhamtari	13	Seedlac, Button lac, Bleached lac
	Jajgir-Champa (Sakti)	3	Seedlac, Shellac, Bleached lac, Dewaxed Shellac, Lac dye
	Kanker	2	Seedlac
	Korba (Kathgora)	6	Seedlac, Shellac, Bleached lac
	Rajnandgaon	1	Seedlac, Shellac
	Raipur	2	Bleached lac, Aleuritic acid
Jharkhand	Daltonganj	2	Seedlac
	Ranchi (Khunti, Bundu, Murhu)	10	Seedlac, Button lac, Shellac, Lac dye, Bleached lac
	Simdega	2	Seedlac
	Saraikela-Kharsawan (Chandil)	1	Bleached lac
	W. Singhbhum (Chakradharpur)	1	Shellac
Madhya Pradesh	Indore	1	Seedlac, Bleached lac
	Hosangabad (Bankhedi)	1	Seedlac

Maharashtra	Gondia	6	Seedlac, Shellac, Gasket Shellac Compound, Bleached lac
West Bengal	Purulia (Balarampur)	100	Seedlac, Shellac, Button lac, Bleached lac, Aleuritic acid, lac wax, Dewaxed Decolourised lac
	Purulia (Jhalda)	3	Seedlac, Shellac, Button lac
	Purulia (Tulin)	35	Seedlac, Button lac
TOTAL		181	

Table 6. Amount of sticklac processed in India during 2008-09

State	Districts/ Centers	Quantity processed (tons)
Chhattisgarh	Bilaspur (Pendra)	50
	Dhamtari	2800
	Janjgir-Champa (Sakti)	600
	Kanker	400
	Korba (Kathgora)	2700
	Rajnandgaon	200
	Sub total	6750
Jharkhand	Daltonganj	200
	Ranchi (Khunti, Bundu)	3200
	Saraikela-Kharsawan (Chandil)	50
	Simdega	400
	West Singhbhum (Chakradharpur)	50
	Sub total	3900
Maharashtra	Gondia	1200
Madhya Pradesh	Indore	50
	Bankhedi	200
	Sub total	250
West Bengal	Purulia (Balarampur)	7500
	Purulia (Jhalda)	150
	Purulia (Tulin)	200
	Sub total	7850
	Total	19700

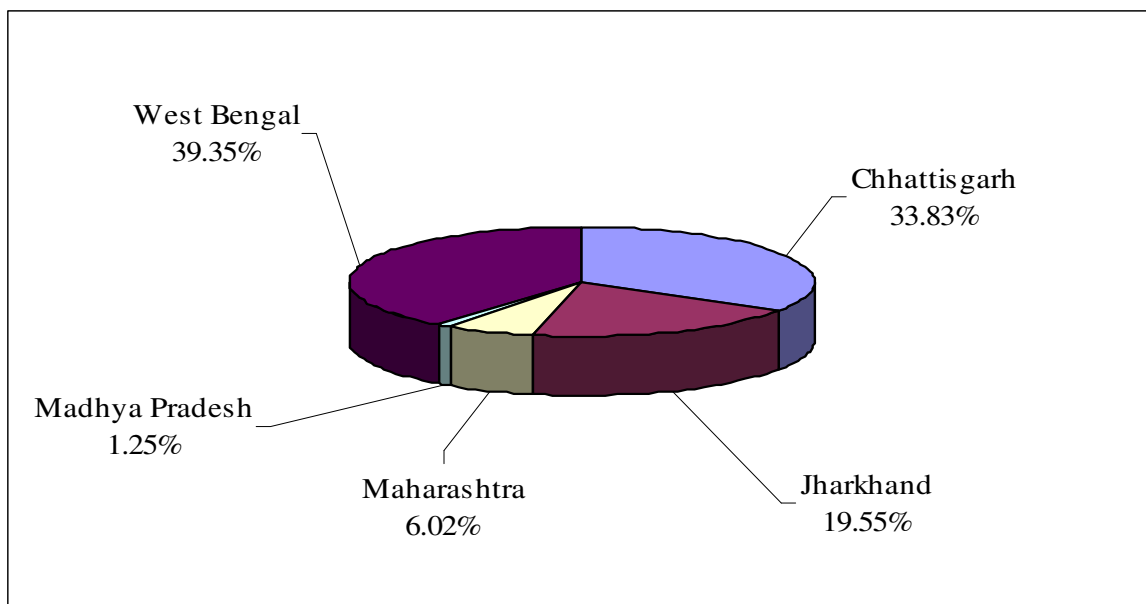


Fig 3. Share of different states in lac processing at national level

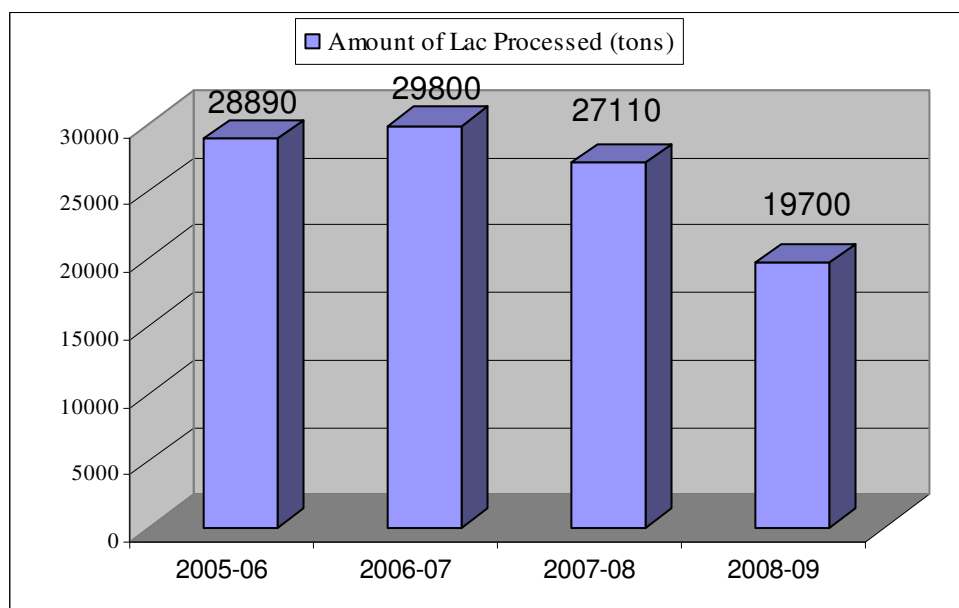


Fig 4. Lac processing in India during last four years

Table 7. Markets with annual arrival of over 500 tons during 2009-10

States	Primary Markets	Secondary Markets
Chhattisgarh	Bhaisama Bazar, Pali, Sambalpur	Dhamtari, Kathgora, Sakti
Jharkhand	Jaldega, Palkot, Bano, Kolebira	Bundu, Khunti,
Madhya Pradesh	Barghat, Katangi, Waraseoni	-
Maharashtra	-	Gondia
West Bengal	-	Balarampur

Export of lac from India

Data on export of lac and its value added products from India were collected from Shellac and Forest Products Export Promotion Council, Kolkata. The total export of lac and its value added products during the year 2008-09 was 6968.42 tons valued Rs.124.15 crores. Details of export in quantity and value during 2008-09, list of top 15 countries importing Indian lac and Export of lac during last five years have been presented in the Table 8, 9 and 10 while the trend in export of lac in quantity and value during last five years and share of different items of lac export from India are shown in Fig. 5 and 6 respectively.

Table 8. Export of lac and its value added products from India during 2008-09

Sl.No.	Name of product	Export in 2008-09	
		Quantity (tons)	Value (Rs. lakh)
1.	Shellac	5088.65	7628.86
2.	Seedlac	913.66	1301.22
3.	Dewaxed shellac	391.68	1126.57
4.	Bleached lac	398.60	942.64
5.	Aleuritic acid	125.00	1315.34
6.	Gasket lac	8.68	14.36
7.	Shellac wax	42.15	85.51
Total		6968.42	12414.50

Table 9. Top 15 importing countries of Indian lac during 2008-09

Sl. No.	Country	Quantity (tons)	Value (Rs. lakh)
1.	Bangladesh	948.50	1635.82
2.	USA	720.88	1439.07
3.	ARE	1018.88	1426.20
4.	Indonesia	907.60	1226.02
5.	Germany	654.85	1160.89
6.	Switzerland	103.00	1107.76
7.	Pakistan	579.57	749.71
8.	UAE	471.14	695.33
9.	Spain	209.00	486.71
10.	Italy	280.40	403.88
11.	China	52.60	341.31
12.	South Africa	139.20	305.74
13.	Hongkong	121.19	182.51
14.	Netherland	98.00	142.26
15.	UK	60.50	128.50
16.	Other countries	603.11	982.79
TOTAL		6968.42	12414.50

Table 10. Export of lac during last five years

Year	Quantity (tons)	Value (Rs. Lakh)
2004-05	7301.53	16587.51
2005-06	7280.58	15962.08
2006-07	7362.58	14772.39
2007-08	7906.33	12426.87
2008-09	6968.42	12414.50

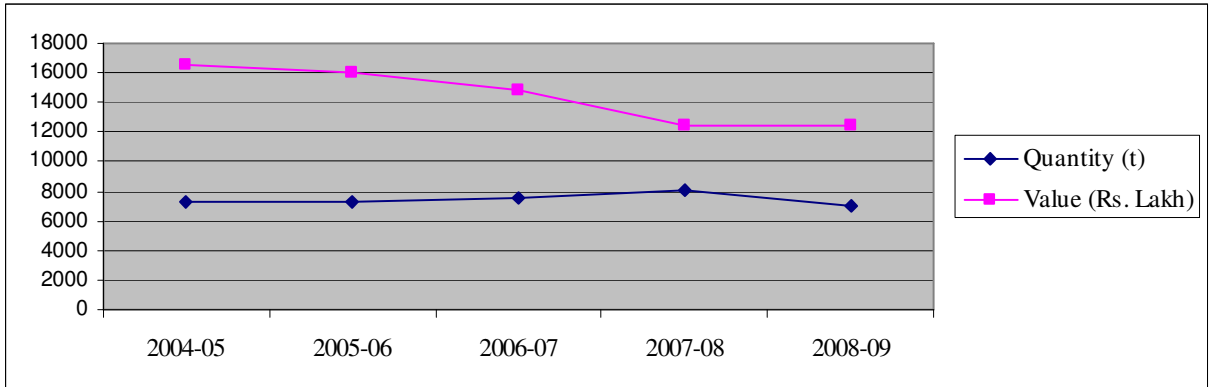


Fig 5. Trend in export of lac from India during last five years

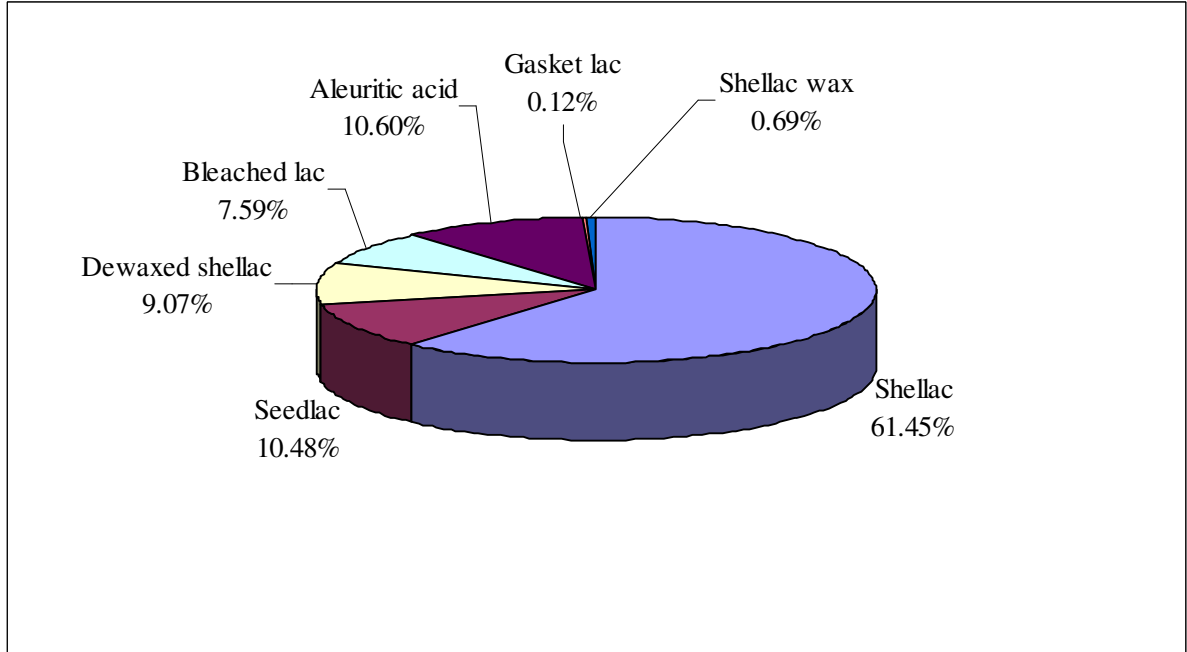


Fig. 6. Share of different items of lac export from India (in value)

Import of lac in India

Data on import of lac in India were collected from Directorate General of Commercial Intelligence and Statistics (DGCI&S), Kolkata. The total import of different kinds of lac during the year 2008-09 was 2102.49 tons valued Rs. 15.97 crores. Import of lac in quantity and value during last five years have been presented in the Table 11 while trend in import of lac in quantity and value during last five years in India are shown in Fig. 7.

Table 11. Import of lac during last five years

Year	Quantity (tons)	Value (Rs. Lakh)
2004-05	1,930.5	1,728.48
2005-06	5,813.37	4,616.62
2006-07	7,365.64	5,650.53
2007-08	5,797.22	3,461.59
2008-09	2,102.49	1,597.30

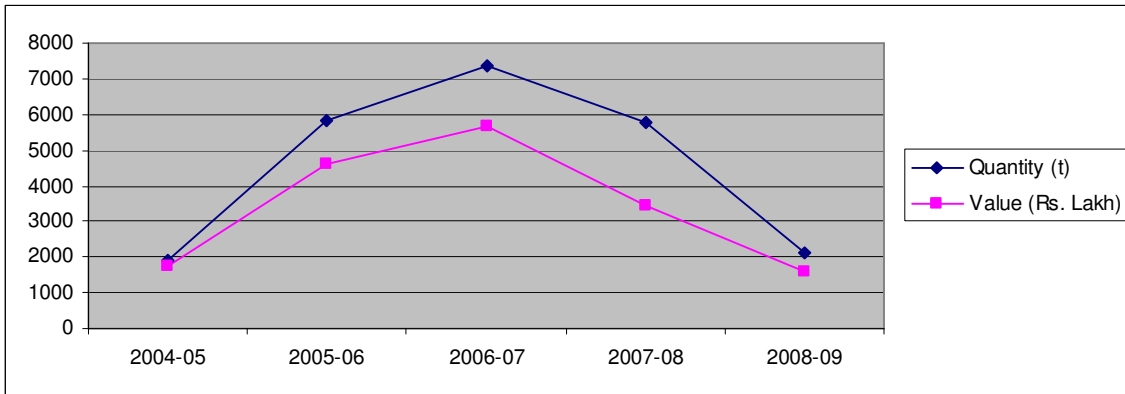


Fig 7. Trend in import of lac in India during last five years

Diversified uses of lac in India

Domestic consumption of lac and its value added products in various sectors have been quantified after having detailed discussions with traders, manufacturers and exporters of lac. Present scenario of product-wise consumption of lac in various sectors with approximate quantity has been presented and given in the Table 12.

Table 12: Diversified uses of lac in India

Name of products	Approximate quantity used in India (tons)	Application area	Share of different sectors (in %)
Seedlac/ Shellac/ Button Lac	2500	Paint & Varnish	58
		Handicraft (cottage)	20
		Ornaments	5
		Cosmetics	3
		Electrical insulation	4
		Pharmaceutical Industries	3
		Bulb capping cement	4
		Others	3
Bleached lac	150	Colorless varnish	70
		Pharmaceutical Industries	15
		Chocolate coating	5
		Other	10
Aleuritic Acid	25	Perfumery Industry	85
		Cosmetics	10
		Fine chemicals/Bio-active	3
		Pharmaceutical Industries	2
Dewaxed De-colored Lac	100	Fruit coating	5
		Varnish	80
		Other	15
Gasket Shellac	150	Automobile Industries	40
		Sanitary fitting	60
Wax	15	Polish (Floor, Shoe, Auto mobile polish)	70
		Cosmetics	10
		Other	20
Dye	2	Textile Industries	100

Export and import of Natural Resins and Gums

Data on export and import of natural resins, gums & gum-resins were collected from Directorate General of Commercial Intelligence and Statistics (DGCI&S), Kolkata. The total export of natural resins, gums and gum-resins during the year 2008-09 was 239720.42 tons valued Rs. 1507.57 crores and total import was 57744.26 tons valued Rs. 324.10 crores. Details of export and import of natural resins, gums and gum-resins has been presented in the Table 13. Trend in export and import of natural resins and gums in quantity and value during last five years has been shown in Fig. 8 and Fig. 9 respectively.

Table 13: Export and import of natural resins, gums & gum-resins during 2008-09.

Sl. No.	Name of product	Export in 2008-09		Import in 2008-09	
		Quantity (tons)	Value (Rs. Lakh)	Quantity (tons)	Value (Rs. Lakh)
A. Natural Resins					
1.	Copal	0.85	1.09	1289.62	321.74
2.	Dammar Batu	13.62	13.18	8933.46	1830.52
3.	Mastic Gum	-	-	29.70	6.78
4.	Gum Rosin	110.71	82.54	27240.76	11362.86
5.	Iac	6968.42	12414.50	2102.49	1597.30
6.	Other Resins	769.10	630.00	635.90	392.85
Total		7862.70	13141.31	40231.93	15512.05
B. Gums					
1.	Gum Arabic	1592.04	2223.49	15803.50	4443.00
2.	Asian Gum	381.00	695.65	127.24	146.98
3.	African Gum	-	-	33.00	4.50
4.	Karaya Gum (Indian Tragacanth)	984.08	1833.74	-	-
5.	Tragacanth (Adracanth)	0.30	0.48	2.00	1.38
6.	Guar Gum Refined Split	55433.05	24999.17	-	-
7.	Guar Gum Treated and Pulverized	170866.27	104656.33	42.57	43.50
8.	Xanthum Gum	10.64	15.85	43.95	101.95
9.	Other Natural Gums	1537.29	1601.09	344.09	681.56
Total		230804.67	136025.80	16396.35	5422.87
C. Gum Resins					
1.	Asafetida	840.09	1355.19	653.70	10894.96
2.	Myrrh	1.20	0.87	45.73	80.84
3.	Oilbanum or Frankincence	96.51	138.01	46.57	70.23
4.	Other Gum Resins	115.25	95.71	369.98	428.91
Total		1053.05	1589.78	1115.98	11474.94
Grand Total		239720.42	150756.89	57744.26	32409.86

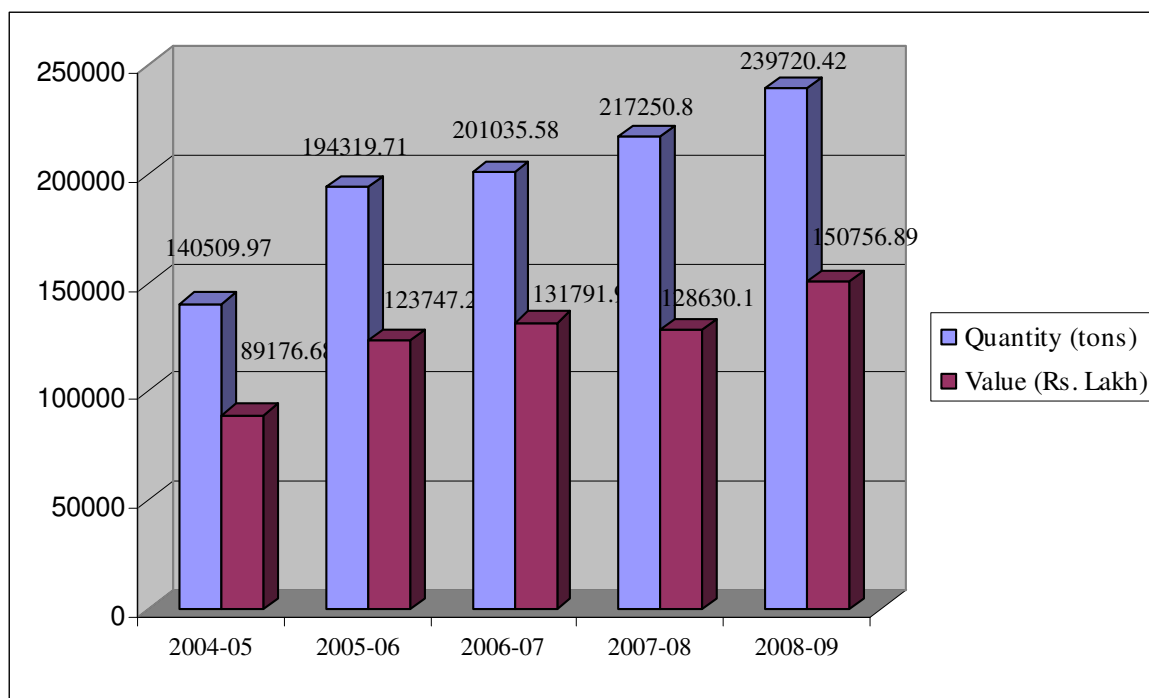


Fig 8. Trend in export of Natural Resins and Gums from India during last five years

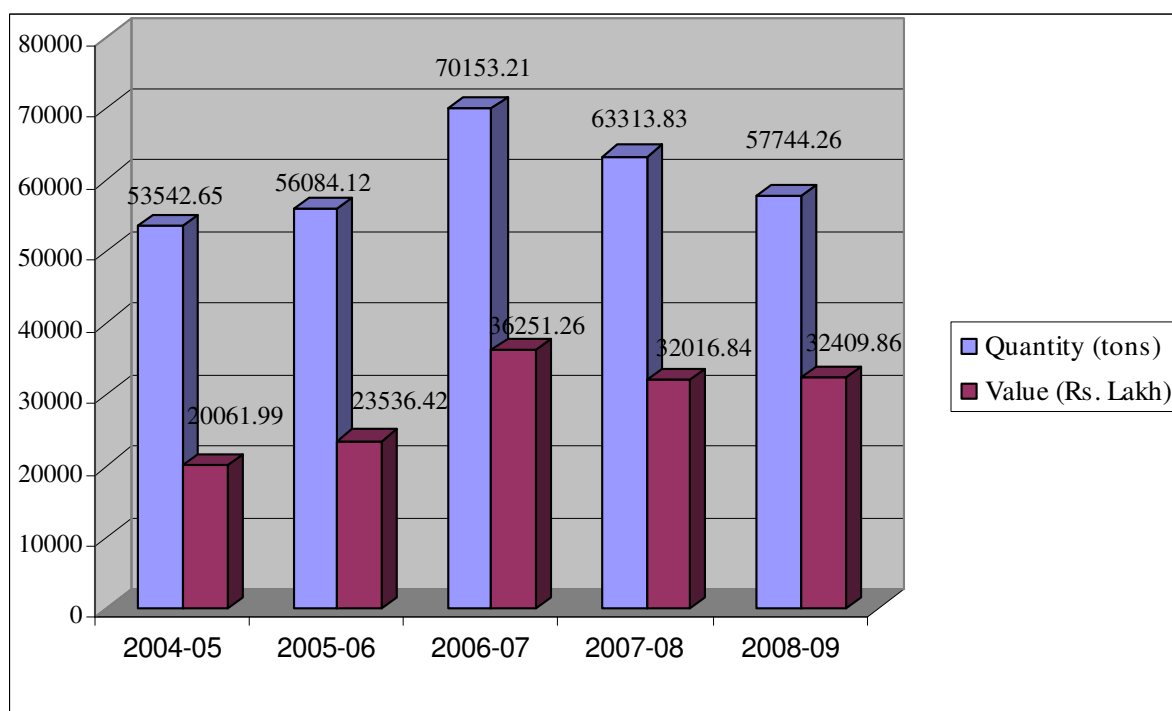


Fig 9. Trend in import of Natural Resins and Gums in India during last five years

Table 14. Lac production scenario in India during 2009-10 (in tons)

Name of state / Districts	Name of crop				Total production
	<i>Baisakhi</i>	<i>Jethwi</i>	<i>Katki</i>	<i>Aghani</i>	
Andhra Pradesh	15	4	15	1	35
Assam	40	0	60	0	100
Chhattisgarh					
Bastar	5	50	5	25	85
Bilaspur	175	20	25	15	235
Dhamtari	50	60	5	10	125
Durg	20	0	0	0	20
Janjgir-Champa	80	50	10	30	170
Kanker	40	550	15	225	830
Korba	1400	400	110	125	2035
Mahasamund	100	15	30	5	150
Raipur	40	275	25	120	460
Rajnandgaon	400	80	60	30	570
Surguja	60	0	25	0	85
Others	100	50	30	50	230
TOTAL	2470	1550	340	635	4995
Gujarat	10	20	10	25	65
Jharkhand					
Garhwa	40	0	25	0	65
Gumla	25	1100	10	300	1435
Latehar	10	0	10	0	20
Palamau	125	0	25	0	150
Ranchi	75	550	15	250	890
Simdega	30	2400	15	700	3145
West Singhbhum	40	900	20	100	1060
Others	40	50	20	50	160
TOTAL	385	5000	140	1400	6925
Madhya Pradesh					
Annuppur & Shahdol	15	5	5	3	28
Balaghat	450	5	90	2	547
Chhindwada	10	20	5	30	65
Dindori	5	10	2	10	27
Hosangabad	25	50	5	40	120
Mandla	50	15	20	20	105
Narshinghpur	5	5	3	5	18
Seoni	1300	10	60	5	1375
Others	50	10	15	30	105
TOTAL	1910	130	205	145	2390
Maharashtra					
Bhandara	30	0	10	0	40
Chandrapur	20	0	10	0	30
Garhchiroli	30	0	5	0	35
Gondia	275	0	140	0	415
TOTAL	355	0	165	0	520
Meghalaya (Garo hills)	5	0	5	0	10
Orissa					
Balasore	10	20	10	20	60
Koraput	10	10	10	15	45
Mayurbhanj	10	20	20	30	80
Nabarangpur	20	45	25	40	130
Others	20	20	25	20	85
TOTAL	70	115	90	125	400
Uttar Pradesh	175	0	25	0	200
West Bengal					
Bankura	10	0	10	0	20
Midnapur	250	0	300	0	550
Purulia	10	180	15	40	245
Others	5	20	10	5	40
TOTAL	275	200	335	45	855
GRAND TOTAL	5710	7019	1390	2376	16495

Table 15. Lac producing areas in the country

Name of State/ District	Major lac producing area
Andhra Pradesh	
Adilabad	Utnoor
Vishakhapatnam	Paderu
Assam	
Karbi-Anglong	Amsoi, Amtreng, Baithalangsui, Hojai, Nelli, Ulikunchi
Bihar	
Gaya	Malichak, Raniganj
Chhattisgarh	
Bastar	Keshkal, Kondagaon, Narainpur
Bilaspur	Gorella, Kota, Lorami, Pendra
Dhamtari	Gatta Silli, Nagri, Sihawa
Durg	Daudi, Lohara, Kusum
Janjgir-Champa	Balod, Sakti
Kanker	Antagarh, Bhanupratapur, Korar, Narharpur, Sambalpur
Korba	Bhaisama Bazar, Chaitama, Chhuri, Haldi Bazar, Katghora, Korvi, Madanpur, Pali, Pasan
Mahasamund	Bagbahara, Basana, Mahasamund, Pithora, Tendukona
Raipur	Amlipadar, Chhaila, Chhura, Gariyaband, Indogaon, Mainpur, Udanti
Rajnandgaon	Aawadhi, Bharitola, Khardi, Manpur, Mohala-chowki
Sarguja	Balrampur, Chando, Chalgi, Mainpat, Pasta, Pratappur, Premnagar, Raghunathnagar, Ramanujganj, Wandrafnagar,
Raigarh	Dharmi, Dharmjaigarh, Lailunga, Pathalgaon
Gujarat	
Panchmahal	Godhara
Vadodara	Chhotadeupur, Kawant, Jhonjh, Keori, Kundal Ghata
Jharkhand	
Garhwa	Bargarh, Garhwa, Godarmana, Rakshi, Ramganga, Ramkonda, Ranka, Tandwa
Gumla	Chainpur, Dumari, Kanshir, Karra, Palkot, Patratoli, Raidih
Latehar	Balumath, Brahmani, Chandwa, Latehar, Manika, Satbarwa
Palamau	Barwadih, Garu, Matalong, Panki, Raj Chaipur, Sarju
Ranchi	Angara, Banta, Bundu, Jonha, Namkum, Ormanjhi, Silli, Hembrom, Khunti, Maranghada, Murhu, Soeko, Sonahatu, Tamar, Torpa, Birbanki
Simdega	Bano, Hating Ghora, Jaldega, Kolebira, Lachragarh
West Singhbhum	Anandpur, Bandgaon, Baskata, Chaibasa, Chakradharpur, Goelkera, Lodai, Manoharpur, Sonuwa, Toklo
Madhya Pradesh	
Anuppur	Jaitahari, Keshwahi, Kotma, Venkatnagar
Balaghat	Baihar, Baraseoni, Katangi, Lalbarra, Lamta, Langi, Parashwada
Chhindawada	Damo
Dindori	Bazak, Bhanupur, Karanjia, Ramnagar, Rampur
Hosangabad	Bankhedhi, Bawai, Daggrai, Darawpadaw, Hapa, Jonahata, Kekra, Lokamti, Pipariya,
Mandla	Bichhia, Chabbi, Ghughari, Kalpi, Mahegaon, Mavai, Nainpur, Narainganj, Navas-Bablia
Narshinghpur	Chicholi, Godarwara, Kalakhar, Kalyanpur, Nayakheda, Salechauka
Seoni	Barghat, Ghansore, Kahani, Kanewara, Keolari, Khamaria, Khari
Shahdol	Budhar, Jaitpur, Sohagpur
Maharashtra	
Bhandara	Gobarwahi, Nikadongri
Chandrapur	Bandh, Navegaon
Garhchiroli	Allapalli, Bamragarh
Gondia	Amgaon, Chopra, Goregaon, Hirapur, Kampta, Kati, Kotjamura, Kurodhi, Salekasa, Tiroda
Meghalaya	
Garo Hills	Damra, Dodno, Nongpoh, Tura
Orissa	
Balasore	Haldipada, Jaleshwar, Nilagiri
Keonjhar	Telkoi
Koraput	Ramgiri
Mayurbhanj	Jashipur, Kaptipada, Karanjia, Padampokhari, Sarat, Thakurmunda, Udla,
Nabarangpur	Chandahandi, Raighar
Sundergarh	Khandadhar, Kutra, Rajgangpur
Uttar Pradesh	
Sonbhadra	Doodhi
Allahabad	Koraon, Meja
West Bengal	
Bankura	Idpur, Khatra, Raipur, Rani Bandh,
Midnapur	Katai, Kuti, Moina, Paskura, Ramnagar, Tamluk
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